

Department of Applied Chemistry
 Chaoyang University of Technology Graduate Course Requirement
 (for the four year students of day division admitted in the 2013 academic year)

Code	Core courses	Credit
	Physical Chemistry	3
	Biochemistry	3
	Service-Learning in Applied Chemistry	2
	Organic Chemistry Laboratory	1
	Molecular Biology	3
	Biological experiment	1
AC1001	Calculus(I)	2
AC1002	General Chemistry (I)	3
AC1004	General Biology (I)	2
AC1005	Introduction to Computers	3
AC1006	Calculus(II)	2
AC1007	General Chemistry (II)	3
AC1009	General Biology (II)	2
AC1010	General Physics	3
AC1015	Introduction of Materials	2
AC1016	General Chemistry Laboratory (I)	1
AC1017	General Chemistry Laboratory (II)	1
AC1018	Fundamental Mathematics	0
AC2001	Analytical Chemistry (I)	3
AC2002	Organic Chemistry(I)	4
AC2004	Analytical Chemistry(II)	3
AC2006	Organic Chemistry(II)	4
AC2011	Structure of Atoms and Molecules	3
AC2019	Analytical Chemistry Laboratory	1
AC2021	Organic Chemistry Laboratory (I)	1
AC2022	Organic Chemistry Laboratory (II)	1
AC3001	Physical Chemistry	3
AC3002	Inorganic Chemistry (I)	3
AC3003	Physical Chemistry (II)	3
AC3004	Biochemistry(I)	3
AC3005	Microbiology	3
AC3006	Inorganic Chemistry	3
AC3008	Biochemistry(II)	3
AC3010	Seminar(1)	1
AC3011	Instrumental Analysis(I)	3
AC3012	Seminar(2)	1
AC3026	Introduction of Biotechnology	2
AC3045	Instrumental Analysis(II)	3

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Code	Core courses	Credit
AC3050	Physical Chemistry Laboratory	1
AC3051	Biochemistry Laboratory	1
AC4002	Internship	2
	Total:	92
Code	Elective courses	Credit
	Special Topics: Enterprise Program (4)	1
	Analysis and Application of Food and Drug	3
	Special Topics: Enterprise Program (5)	1
	Plant Protection	3
	Crop science	2
	Green Materials	3
	Planning and Market of Biotech Product	3
	Creativity	2
	Practice and Application of Food Chemistry	3
	Plant Physiology	3
	Advanced Chemistry Exercise	1
	Interfacial Chemistry and Formulation Development Practices	3
	Special Topics: Enterprise Program (2)	1
	Plant Cell and Tissue Culture	3
	Introduction to the science of sustainable environment	2
	Special Topics: Enterprise Program (6)	1
	Green Production	3
	Special Topics: Enterprise Program (3)	1
	Industrial Waste Minimization and Resource Recovery	3
	Special Topics: Enterprise Program (1)	1
		2
	Biological Plant Protectants	3
	Basic Practice in Chemical Engineering	2
	Application and Practice of Pheromone	3
	Textile Polymers and Practices	3
	Enterprise Seminar II - Biochemical Science and Technology	1
	Enterprise Seminar II - Biochemical Science and Technology	1
AC1011	Introductory Chemistry English	2
AC1013	Chemistry English	2
AC2008	Introduction of Biomaterials	2
AC2009	Mathematics for Chemistry	2
AC2010	Energy and Mass Balance	2
AC2014	Introduction of Quantum Chemistry	3

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Code	Elective courses	Credit
AC2020	Safety and Hygiene in Chemical Industries	2
AC3014	Special Topics of Chemical Industry	2
AC3016	Pesticide Chemistry	3
AC3018	Enzymology	3
AC3020	Material Chemistry	3
AC3021	Spectroscopy of Organic Chemistry	3
AC3023	Selected Topics(1)	2
AC3025	Natural Product Chemistry	3
AC3027	Organic Reaction Mechanisms	3
AC3029	Polymer Chemistry	3
AC3032	Applied Microbiology	3
AC3034	Organic Synthesis	3
AC3035	Introduction of Biochemical Engineering	3
AC3037	Introduction to GMO Products	3
AC3038	Selected Topics(2)	2
AC3039	Polymer Material	3
AC3040	Introduction of Electrochemistry	3
AC3041	Fermentational Biotechnology	3
AC3044	Cosmetic	3
AC3053	Instrumental Analysis Laboratory	1
AC4004	Chemical Specialty	3
AC4007	Cell Biology	3
AC4009	Introduction to Mmass Spectrometry	3
AC4017	Immunology	3
AC4020	Organometallic Chemistry	3
AC4021	Electrical and Optical Properties of Material	3
AC4022	Engineering Ethics	1
AC4023	Selected Topics and Project Management	2
AC6063	Special Topics in Material Chemistry	3
Total:		149
University Requirements	13 courses 30 credits	
Core courses	41 courses 72 credits	
Elective courses	Minimum elective 24 credits	
Total requirement	130credits	